

Title (en)

Method and apparatus for displacing drilling fluids with completion and workover fluids

Title (de)

Verfahren und Vorrichtung zur Verdrängung von Bohrspülung mittels Komplettierungs- oder Aufwältigungsflüssigkeiten

Title (fr)

Procédé et dispositif permettant de déplacer des fluides de forage au moyen de fluides de complétion et de fluides de reconditionnement

Publication

**EP 1911927 A2 20080416 (EN)**

Application

**EP 07120932 A 20000609**

Priority

- EP 00938252 A 20000609
- US 32954499 A 19990610

Abstract (en)

The mechanical separation of drilling fluid and a completion fluid by swab cups (86, 88) is used in combination with a casing scraper (90, 92) and movement of the tubing (18) to clean up a wellbore. In a first embodiment, reverse circulation is used placing a completion fluid above swab cups (86, 88) and lowering the pipe (18) to displace a drilling fluid. In a second embodiment, in combination with a casing scraper (90, 92), a completion fluid is pumped into an annulus located below swab cups (86, 88) and the drilling fluid is displaced from above the swab cups (86, 88) by raising the tubing (18). Alternately, large swab cups (360, 362) are shearingly secured in combination with smaller swab cups (370, 372) and casing scraper (380) allowing the apparatus to be used with progressively smaller diameter casing (310) during the same operation of the apparatus.

IPC 8 full level

**E21B 37/02** (2006.01); **E21B 21/00** (2006.01); **E21B 37/00** (2006.01); **E21B 37/10** (2006.01)

CPC (source: EP US)

**E21B 21/00** (2013.01 - EP US); **E21B 37/00** (2013.01 - EP US); **E21B 37/10** (2013.01 - EP US)

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

**WO 0077339 A1 20001221**; AT E394578 T1 20080515; AT E503078 T1 20110415; AU 5332000 A 20010102; BR 0011453 A 20020604; BR 0011453 B1 20090505; CA 2374709 A1 20001221; CA 2374709 C 20090203; DE 60038804 D1 20080619; DE 60045781 D1 20110505; DK 1208285 T3 20080825; DK 1911927 T3 20110704; EP 1208285 A1 20020529; EP 1208285 A4 20050323; EP 1208285 B1 20080507; EP 1911927 A2 20080416; EP 1911927 A3 20090902; EP 1911927 B1 20110323; NO 20016031 D0 20011210; NO 20016031 L 20020211; NO 321871 B1 20060717; US 2003000704 A1 20030102; US 6371207 B1 20020416; US 6758276 B2 20040706

DOCDB simple family (application)

**US 0015953 W 20000609**; AT 00938252 T 20000609; AT 07120932 T 20000609; AU 5332000 A 20000609; BR 0011453 A 20000609; CA 2374709 A 20000609; DE 60038804 T 20000609; DE 60045781 T 20000609; DK 00938252 T 20000609; DK 07120932 T 20000609; EP 00938252 A 20000609; EP 07120932 A 20000609; NO 20016031 A 20011210; US 32954499 A 19990610; US 8261002 A 20020225